

Interpersonal Ambivalence, Perceived Relationship Adjustment, and Conjugal Loss

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Ambivalence is widely assumed to prolong grief. To examine this hypothesis, the authors developed a measure of ambivalence based on an algorithmic combination of separate positive and negative evaluations of one's spouse. Preliminary construct validity was evidenced in relation to emotional difficulties and to facial expressions of emotion. Bereaved participants, relative to a nonbereaved comparison sample, recollected their relationships as better adjusted but were more ambivalent. Ambivalence about spouses was generally associated with increased distress and poorer perceived health but did not predict long-term grief outcome once initial outcome was controlled. In contrast, initial grief and distress predicted increased ambivalence and decreased Dyadic Adjustment Scale scores at 14 months postloss, regardless of initial scores on these measures. Limitations and implications of the findings are discussed.

The death of a spouse is among the most stressful experiences a person might endure. Although some conjugally bereaved individuals manage to abide the pain of loss with minimal disruptions in functioning, many evidence clear distress and overt difficulties for several years or longer (Lehman, Wortman, & Williams, 1987). Explanations of the individual differences in conjugal grief severity have frequently relied on the metaphors provided by infant-caregiver attachment and separation behaviors (Bowlby, 1980; M. J. Horowitz, Bonanno, & Holen, 1993; Raphael, 1983). When conjugal loss occurs in the context of a normal, healthy attachment relationship, mourning is thought to involve intense yearning for and idealization of the lost spouse (Futterman, Gallagher, Thompson, & Lovett, 1990; Lopata, 1979; Parkes & Weiss, 1983). This is followed by a gradual

acceptance of the pain of separation and a relinquishing of the attachment in preparation for new relationships (M. J. Horowitz et al., 1993; Raphael, 1983). In contrast, complicated bereavement is thought to result from an ambivalent attachment that is exacerbated by the spouse's death and thus "comes to the fore" (Freud, 1917/1957, p. 161) during bereavement to interfere with grief resolution (e.g., Lindemann, 1944; Parkes & Weiss, 1983).

To the best of our knowledge, the hypothesized causal relationship between ambivalence and grief has not been evaluated empirically. This may be in part explained by myriad difficulties clinical researchers have encountered in operationally defining ambivalence (Sincoff, 1990). In the present study, we attempted to remedy this deficit by measuring representations of the lost relationship at a relatively early point in bereavement and comparing these representations with outcome measures obtained over the next several years. We used both a standard measure of relationship adjustment, the Dyadic Adjustment Scale (DAS), and a new measure of interpersonal ambivalence, the Semantic Representation of Others Scale (SROS).

Freud (1917/1957) originally proposed that ambivalence interferes with grief resolution by producing guilt and self-reproach, thereby increasing the depressive aspects of grief. Guilt arising from ambivalence has also been thought to cause bereaved individuals to dwell on themselves (Krupp, 1972), thereby preventing an objective working through of the loss (Lazare, 1989; Rando, 1993). More recently, the behavioral organization of the ambivalent attachment pattern has been implicated (Bowlby, 1980; Fraley & Shaver, in press; Raphael, 1983). In this view, which borrows heavily from infant-caregiver attachment behaviors and separation responses, ambivalent adults both desire and reject the objects of their attachment and thus experience extreme distress at separations yet find it nearly

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impossible to accept resolution of separation episodes. During bereavement, ambivalent individuals are thought to experience considerable pain and to be unable to let go of the lost relationship. Regardless of the mechanism, these theories each hypothesize that ambivalent representations of the deceased spouse early in bereavement lead to chronic or prolonged grief (M. J. Horowitz et al., 1993; Lazare, 1989; Parkes & Weiss, 1983; Raphael, Middleton, Martinek, & Misso, 1993; Sanders, 1993). Further, because positive evaluations of a relationship are predicated on unambiguously positive representations of the partner (cf. Murray, Holmes, & Griffin, 1996), an inverse correlation is presupposed between ambivalence toward a conjugal partner and recollections of adjustment in the conjugal relationship. Thus, the ambivalence-prolongs-grief hypothesis also predicts that ambivalence toward the deceased and recollected relationship adjustment will show opposite patterns of association with long-term grief outcome.

Although the link between ambivalence and chronic mourning is assumed to result from a relatively stable, underlying attachment style, empirical support for such a supposition requires extensive preloss data on the quality of the conjugal relationship, which for various reasons has proven notoriously difficult to obtain. However, most accounts of ambivalence and mourning do not actually pertain to the quality of the lost conjugal relationship but to the survivor's representation of the lost relationship during bereavement. The malleable nature of adult interpersonal representations is well documented, as is the fact that representations of intimate relationships can change over time (Benjamin & Friedrich, 1991; Bumpus & Aquilino, 1995; Giddens, 1992), even when they are experienced as relatively stable (McFarland & Ross, 1987). In the specific context of bereavement, Fenichel (1945) observed that the death of a loved one in and of itself can create ambivalent representations, regardless of whether or not the relationship was previously conflicted. This view was suggested even more clearly in Bowlby's (1961, 1980) description of mourning as analogous to the temporary-separation response, wherein yearning and intense sadness eventually blend with anger, reflecting the urge "first to recover . . . and then to scold" the deceased (Rando, 1993, p. 104). Because full acknowledgment of the permanence of the loss typically comes only gradually (M. J. Horowitz et al., 1993), the enduring pain of separation experienced by severely grieved individuals may eventually produce a sequential experience of sadness followed by angry reproach and, consequently, an increasingly ambivalent representation of the lost relationship (Bowlby, 1980; Cerny & Buskirk, 1991; Lazare, 1989; Parkes & Weiss, 1983; Raphael, 1983). A similar outcome is suggested by the emerging data on the reconstructive nature of memory (Bonanno, 1990, 1995; Christianson & Safer, 1996; B. Ross, 1991): Intense and prolonged grief may bias memory toward the negative features of the lost relationship, which in turn may engender more negative, and consequently more ambivalent, representations of the relationship across the course of bereavement. We explored these alternative hypotheses by examining whether 6-month levels of grief and distress might lead to greater recollection of the problematic features of the lost relationship and to increasingly ambivalent representations of the deceased spouse at 14-month assessments.

Most definitions of ambivalence emphasize the simultaneous

existence of strong, polar opposite feelings or attitudes toward a given person or object (Moore & Fine, 1990; Sincoff, 1990; Stroebe & Stroebe, 1987). One of the factors limiting the development of an easily administered questionnaire measure of ambivalence has been its assumed unconscious nature (Thompson & Zanna, 1995). That is, ambivalence is thought to operate outside the range of a person's conscious apprehension and would not be captured reliably by questionnaire. Another methodological problem is that self-report questions about ambivalence tend to confound ambivalence with mere indifference (e.g., the middle score on a bipolar scale; Kaplan, 1972).

Interestingly, solutions to these problems have been available for a number of years but were, until recently, relatively unacknowledged in the clinical literature (Sincoff, 1990). Scott (1966) and later Kaplan (1972) developed simple questionnaire methods for measuring ambivalent attitudes in which respondents separately evaluate the positive aspects of a given object or topic while ignoring its negative features and separately evaluate the negative aspects of the same topic or object while ignoring its positive features. For example, respondents might be asked to first consider only the positive features of capital punishment, and then separately to consider only the negative features of capital punishment. The separate positive and negative ratings are then combined algorithmically into a single index of ambivalence wherein extreme ratings in the positive and the negative direction produce higher ambivalence scores (Kaplan, 1972; Scott, 1966; scoring algorithms are discussed in greater detail in the Method section).

The intimate link between cognitive appraisal and emotion (Lazarus, 1991) suggests that this method would be ideal for capturing the affective tone of interpersonal representations during bereavement. Accordingly, we developed a questionnaire measure, the SROS, that asks participants to evaluate a specified target person using two separate response forms, one with eight positive trait adjectives and one with eight matching negative trait adjectives. To establish preliminary construct validity for the SROS, we compared the ambivalence score that resulted from the combination of the separate positive and negative ratings with the DAS, neuroticism, the Inventory of Interpersonal Problems (IIP; L. M. Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988), and facial expressions of sadness and anger coded from videotapes of participants discussing their relationship to the deceased. High scores on the DAS indicate perceptions of a relatively well-adjusted relationship. High scores on neuroticism indicate generalized emotional instability, whereas high scores on the IIP indicate distress that is specifically linked to interpersonal problems. Ambivalent representations of the conjugal partner were expected to correlate inversely with the DAS but to correlate positively with neuroticism and the IIP. In contrast to these measures, the facial expression data offer a behavioral index of ambivalence, in Bowlby's (1961, 1980) terms, as yearning followed by reproach. Thus, ambivalent representations were expected to correlate with the frequency with which facial expressions of sadness were followed by anger. If, on the other hand, the SROS ambivalence score does not actually measure ambivalence—and is more accurately described as a measure of *bivalence*, or complex, well-adjusted representation of the other (Breckler, 1994)—it should correlate positively with the DAS and inversely with both neuroticism and the IIP.

Bivalence, or cognitive complexity, would also suggest a positive association with a range of possible facial emotions, rather than with the specific sequence of competing emotions (sadness followed by anger) linked to ambivalence.

To assess the relationship between ambivalence and long-term grief outcome, we administered the SROS, as well as the DAS, to a sample of midlife, conjugally bereaved adults at 6 months postloss and compared scores on these measures with self-reported distress, perceived health, and an interview measure of grief severity obtained at 6, 14, and 25 months postloss.¹ To explore the possible relationship between initial grief and changes in the perception of the lost relationship, we administered the SROS and DAS a second time, at 14 months postloss. In addition, to determine the unique properties of spousal ambivalence, we had participants complete the SROS concerning a second comparison person whom they had selected as "currently the most important" in their life. Finally, to explore the symptom correlates of the SROS and DAS in intact conjugal relationships, we compared these measures with self-reported distress and perceived health in a nonbereaved comparison sample.

Method

Participants

Bereaved. Conjugally bereaved participants were recruited by newspaper advertisements, posted notices, and referrals from a variety of institutions within the San Francisco Bay area (e.g., medical centers and religious organizations). These sources requested paid volunteers who had sustained the death of a spouse between 3 and 6 months earlier and would be willing to discuss their grief experience so that "more could be learned about the grieving experience from a scientific standpoint." Respondents participated in a structured telephone-screening interview. Inclusion criteria stated that participants must be between the ages of 21 and 55 years, either having been married or having lived with their (deceased) partner for at least 3 years, and not having had experienced serious physical or mental disorders, binge eating, and drug or alcohol abuse during that time. Informed consent was requested for participation in several videotaped interview sessions during the course of the following year.

Fifty-two bereaved participants were available at 6 months postloss. Five bereaved participants (9%) dropped out of the study between 6 and 14 months, reducing the bereaved sample at 14 months to 47 participants. Six bereaved participants (11%) dropped out of the study between 14 and 25 months, reducing the bereaved sample at 25 months to 41 participants. Analyses of differences on the SROS, demographic, and outcome variables between participants who stayed in the study and those who dropped out did not approach significance ($p > .15$).

Nonbereaved. Sixty nonbereaved participants were recruited from notices posted in the San Francisco Bay area requesting participants between the ages of 21 and 55 who were either married or living with their romantic partners for at least 3 years for the "UCSF [University of California, San Francisco] Relationship Study." The means and standard deviations of the bereaved and nonbereaved participants in the present study for several sociodemographic variables are presented in Table 1. The bereaved and nonbereaved samples did not evidence significant differences in gender distribution, level of education, ethnicity, employment status, or family income. Significant differences did emerge for age, $t(110) = 7.09, p < .001$, and duration of relationship, $t(110) = 6.90, p < .001$. The bereaved participants were, on average, significantly older and had had significantly longer relationships than the nonbereaved

participants. These sample differences were considered in the statistical analyses.

Overview of Procedure

Bereaved and nonbereaved participants completed a set of self-report measures pertaining to demographic variables, relationship adjustment (DAS), perceptions of the spouse and of a current important other (SROS), perceived health, and distress (Symptom Checklist—90—Revised; SCL-90-R). Nonbereaved participants completed the self-report measures only once and were mailed a \$12 payment. Bereaved participants completed the self-report measures between 4 and 6 months postloss as part of a larger questionnaire battery (see Bonanno et al., 1995) and were administered a structured grief interview at approximately 5.5 months postloss ($M = 5.46, SD = 1.28$) and a semistructured narrative interview 17 days later, on average. In addition, bereaved participants repeated the SROS and the DAS at 14 months postloss and repeated the SCL-90-R, perceived health measure, and structured grief interview at 14 and 25 months postloss. Bereaved participants were paid \$10 for every hour of participation.

Measures

All participants completed the following questionnaires. Demographic information was obtained from a brief standardized questionnaire. We measured perceived adjustment in the conjugal relationship using the total score from the DAS, which has shown a coefficient alpha of .96 (Spanier, 1976), as well as convergent and discriminant validity (Cohen, 1985; Heyman, Sayers, & Bellack, 1994). We assessed general distress using the Global Symptoms Index (GSI) of the SCL-90-R (Derogatis, 1983). Previous research has found that the GSI successfully differentiates bereaved and nonbereaved individuals (cf. Lehman et al., 1987). Perceived health was assessed by three self-report questions developed by the National Center for Health Services Research for the Health Insurance Study (Brook et al., 1979; Stewart, Ware, Brook, & Davies-Avery, 1978). Brief self-report measures of perceived health status have been found to predict long-term physical health problems (Brook et al., 1979; Davies & Ware, 1981; Mossey & Shapiro, 1982; Ware & Karmos, 1976). In addition, the bereaved sample received the Neuroticism, Extraversion, and Openness Five-Factor Inventory (NEO-FFI; Costa & McCrae, 1992), which provided a measure of neuroticism, and the IIP (L. M. Horowitz et al., 1988), which measures distress specific to interpersonal interactions.

SROS. All participants completed the SROS for their partner (living or deceased) and for an additional person, other than a parent, whom they considered to be currently important in their lives. The SROS requests that respondents rate separately the positive aspects of the specified person while ignoring that person's negative qualities and, on a separate page, rate separately the negative aspects of the specified person while ignoring that person's positive qualities. To minimize the bias inherent in experimenter-defined bipolar pairs (Kaplan, 1972), we adapted the positive and negative adjectives from Benjamin's circumplex modeling of interpersonal behaviors (Benjamin, 1974; Benjamin & Friedrich, 1991). Specifically, each positive adjective was matched with a negative adjective that was conceptually its opposite and with which it had evidenced an inverse correlation (Benjamin, 1974, 1979). Positive adjectives were *assertive, understanding, loving, supportive, expressive, connected, permissive, and trusting*. Corresponding negative adjectives

¹ Data from a subset of the same bereaved participants have been reported in four previous studies examining the experience and expression of emotion as predictor variables (Bonanno & Keltner, 1997; Bonanno, Keltner, Holen, & Horowitz, 1995; Bonanno, Znoj, Siddique, & Horowitz, in press; Keltner & Bonanno, 1997).

Table 1
Demographic Breakdown of Bereaved and Nonbereaved Samples

Demographic variable	Nonbereaved (<i>n</i> = 60)	Bereaved (<i>n</i> = 52)	<i>t</i> or χ^2
Age (years)			
<i>M</i>	33.4	45.1	<i>t</i> (110) = 7.09***
<i>SD</i>	9.08	9.80	
Gender (%)			
Female	64	71	$\chi^2(1) = 0.27$
Male	36	29	
Education (%)			
High school	5	10	$\chi^2(2) = 2.73$
College	53	60	
Graduate	42	30	
Ethnicity (%)			
Caucasian	69	80	$\chi^2(4) = 7.91$
Asian American	12	3	
African American	3	8	
Hispanic American	5	3	
Other	11	6	
Employment (%)			
Full time	42	43	$\chi^2(2) = 1.58$
Part time	33	23	
Unemployed	25	34	
Family income (\$)			
<i>M</i>	66,000	57,000	<i>t</i> (110) = 0.24
<i>SD</i>	22,585	14,051	
Duration of relationship (months)			
<i>M</i>	78	196	<i>t</i> (110) = 6.90***
<i>SD</i>	63	135	

*** $p < .001$.

were *deferential*, *blaming*, *rejecting*, *neglecting*, *sulky*, *protesting*, *controlling*, and *distancing*. The order of the target person and affective valence of the ratings was balanced across participants.

To score the SROS, we first averaged the eight positive and eight negative trait adjectives. To calculate an ambivalence score, we used a method developed by Scott (1966) in which the mean nearer to 0 is squared and then divided by the remaining mean. For example, if a participant's mean positive rating of a target person was 3 and mean negative rating of that same target person was 2.4, then 2.4 was squared and divided by 3, resulting in an ambivalence score of 1.92. Breckler (1994) compared several ambivalence formulas and found Scott's algorithm to be the most mathematically sound (i.e., only Scott's formula showed incremental changes in ambivalence in response to all variations in positive and negative evaluations).

To establish preliminary psychometric data, we administered the SROS to a sample of 115 married adults, 65 women and 50 men, ranging in age from 23 to 53 years ($M = 36.5$, $SD = 8.6$), who rated their current spouses. The positive items yielded item-total correlations ranging from .35 to .72 ($\alpha = .60$). The negative items yielded item-total correlations ranging from .28 to .83 ($\alpha = .63$). In addition, split-half total scores were highly correlated for both positive ($r = .57$) and negative ($r = .61$) items. These data were within the upper range observed in previous studies of attitudinal ambivalence (Thompson & Zanna, 1995) and suggest adequate internal consistency. Ambivalence scores, calculated from the positive and negative means, ranged from 0 to 1.29 ($M = 0.62$, $SD = 0.47$) and were highly correlated with the sum of ambivalence scores calculated separately from each positive-negative item pair ($r = .89$, $p < .001$). Ambivalence scores did not reliably differ by gender, $t(113) = 0.59$, $p > .25$.

Interviewer-rated grief. The bereavement literature has yet to provide a consensual definition of grief (Hansson, Carpenter, & Fairchild,

1993). We assumed that grief should be measured independently from its emotional correlates (Bonanno & Kaltman, 1998; Lazarus, 1991) and should reflect the total disruption in daily functioning that can be attributed to the loss (Bonanno et al., 1995). Accordingly, we developed an interview measure that consisted of 30 unique items, including grief-related cognitive intrusions (e.g., unbidden memories or images of the deceased), behaviors that delay or minimize the finality of the loss (e.g., an inability to part with the deceased's possessions), and difficulties adapting to the loss (e.g., unusual difficulty being emotionally available to significant others).

Interviews were conducted by three doctoral candidates in clinical psychology who were unaware of the study's goals and hypotheses. Interviewers made presence-absence judgments for each grief item. All interviews were videotaped. A randomly selected set of 25 participants were coded independently by a second rater for interrater reliability ($\kappa = .78$). Support for the validity of the total grief score as a measure of grief-related disruption was evidenced by its high correlation with (a) the interviewer's independent global ratings of grief severity ($r = .75$, $p < .001$), (b) ratings of grief severity made blindly by experienced psychotherapists who had conducted independent interviews with a subset ($n = 24$) of the same participants ($r = .67$, $p < .001$; Bonanno et al., 1995), (c) scores on the Texas Revised Inventory of Grief (Faschingbauer, 1981; $r = .64$, $p < .001$), (d) grief-specific intrusion ($r = .59$, $p < .001$) and avoidance scores ($r = .59$, $p < .001$) on the Impact of Event Scale (M. J. Horowitz, Wilner, & Alvarez, 1979), and (e) the Beck Depression Inventory (Beck & Steer, 1987; $r = .60$, $p < .001$).

Facial expressions of sadness and anger. We coded facial behavior for 38 bereaved participants using the free-response portion (approximately 5 min, 30 s) of the narrative interview. The scripted instructions stated that the interview was designed to learn more about "your experience of bereavement, how you see things from your perspective," that

the interviewer would keep track of the time, that the best way to approach the task was to "try to relate as openly as possible whatever comes to mind," and that the interviewer would be listening closely but would speak only to ask clarifying questions. The free-response portion began with the prompt, "Please tell me about your relationship with [the deceased]." Participants were randomly selected for this analysis and did not differ from other participants in the sample (Bonanno & Keltner, 1997). A version of the Facial Action Coding System (FACS; Ekman & Friesen, 1976, 1978) was used to code these interviews. The Emotion Facial Action Coding System (EMFACS) concentrates on emotion-relevant facial muscle movements derived from previous theory and research (Ekman, 1984). Dacher Keltner coded all facial behavior. A second FACS-certified person coded data for 5 randomly selected participants. Both coders were unaware of participants' scores on other measures. Because an infinite number of facial events might be coded, intercoder reliability was evaluated as a ratio in which the number of facial action units on which the two coders agreed was multiplied by 2 and then divided by the total number of action units scored by the two persons. Reliabilities for facial expressions of sadness and anger were .89 and .84, respectively. As expected, on the basis of previous research (Ekman, Friesen, & Ancoli, 1980), the frequency, mean intensity, and mean duration of each type of facial expression of emotion were highly correlated ($r = .71, p < .001$). To increase reliability, we converted these scores to standardized z scores, which were then summed for each participant into sadness and anger magnitude scores.

To allow for sequential analyses, we demarcated the occurrence of facial expressions by narrative units (NUs). Segmentation into NUs was based on coder's intuitive understanding of the natural boundaries of a complete thought or idea (Butterworth, 1975; Stinson, Milbrath, Reidbord, & Bucci, 1994). We calculated segmentation reliability by summing the number of NU markers on which judges agreed, multiplying this sum by 2, and dividing by the total number of NU markers coded. The ratio of agreement was .81. We determined the final markers for NU boundaries by using the majority ratings of the judges.

Results

Descriptive Data

Characteristics of current important other. The mean duration of relationship between bereaved participants and the person whom they chose as current important other was 20.6 years ($SD = 11.8$), with 80% of the sample selecting current others they had known for at least 10 years and 100% of the bereaved sample selecting current others whom they had known prior to the loss. The length of these relationships suggested that participants selected as current important others people with whom they were likely to share their experience of mourning. Consistent with this supposition, almost all of the current others (96%) knew the participant's deceased spouse, and half of the current others (50%) were children from the lost conjugal relationship. Additional categories of current others were close friends (22%), new romantic partners (11%), siblings (11%), other relatives (4%), or a previous spouse (2%).

Psychometric data for SROS scales. Internal consistencies for the bereaved participants' positive ($\alpha = .60$) and negative ($\alpha = .57$) evaluations were similar to those obtained from the pilot sample (see the Method section) and from previous studies of attitudinal ambivalence (Thompson & Zanna, 1995). In addition, split-half total scores for evaluations of the deceased partner were highly correlated for both positive ($r = .68$) and negative ($r = .58$) items. Bereaved participants' evaluations of the

current other also yielded a similar level of internal consistency for positive ($\alpha = .57$) and negative ($\alpha = .50$) items. Split-half total scores for evaluations of the current other were also highly correlated for both positive ($r = .61$) and negative ($r = .63$) items. Finally, again consistent with the pilot data, ambivalence scores calculated from the positive and negative means were highly correlated with the sum of ambivalence scores calculated separately from each positive-negative item pair for partner ($r = .92, p < .001$) and current other ($r = .87, p < .001$).

Validity of the SROS ambivalence score. In support of the validity of the SROS ambivalence score, ambivalence toward the spouse was inversely correlated with DAS adjustment ratings for the conjugal relationship in both the bereaved ($r = -.45, p < .001$) and nonbereaved ($r = -.58, p < .001$) samples. As expected, ambivalent representations of the current important other were not meaningfully correlated with the DAS in either the bereaved ($r = -.17$) or the nonbereaved ($r = -.13$) sample ($ps > .15$), supporting the discriminant validity of the SROS. Ambivalence toward the deceased spouse evidenced the expected correlations with the total score from the IIP ($r = .49, p < .001$) and with neuroticism ($r = .28, p < .05$). Further, following Bowlby's (1980) equation of ambivalence during bereavement with yearning followed by angry reproach, we examined facial expressions of sadness and anger from videotapes of participants discussing their relationship with the deceased during the 6-month narrative interview. All but 1 of the 38 participants whose facial expressions were coded expressed either sadness or anger. Ten participants (26%) expressed both emotions in the same NU, and 7 participants (19%) expressed sadness in one NU followed by anger in the next NU. Ambivalence toward the deceased was approximately twice as strong in participants who showed the sadness-to-anger sequence ($n = 7, M = 1.81, SD = 0.72$) compared with participants who did not ($n = 31, M = 0.75, SD = 0.52$), $t(36) = 4.14, p < .001$.² Ambivalence toward the deceased was also correlated with the frequency with which participants exhibited the sadness-to-anger sequence ($r = .48, p < .01$) and also with the frequency with which participants exhibited sadness and anger in the same NU ($r = .39, p < .01$).

Married Versus Bereaved Comparisons

Perceived dyadic adjustment. Consistent with previous findings suggesting that bereaved individuals idealize their relationship with the lost spouse (Futterman et al., 1990), the bereaved sample had higher mean DAS scores at 6 months ($M = 111.6, SD = 15.4$) relative to the one-time DAS scores in the nonbereaved sample ($M = 97.7, SD = 17.2$), $t(156) = 5.29, p < .001$. Within the bereaved sample, 6- and 14-month DAS scores were highly correlated ($r = .78, p < .001$) and 6- and 14-month DAS means did not differ significantly, $t(67) = 1.44, p > .15$. Thus, the bereaved sample's DAS scores at 14 months ($M = 109.3, SD = 22.3$) remained higher than the one-time

² Because of the small number of participants in one of the cells of this comparison, Levine's test for unequal variances was used. This test did not approach significance ($p > .25$); thus, the use of the t statistic was considered appropriate.

Table 2

Zero-Order Correlations for SROS Ambivalence and DAS Total Score in the Nonbereaved Sample and the Bereaved Sample at 6 Months With Distress (GSI), Perceived Health, and Interviewer-Rated Grief

Variable	n	M	SD	Ambivalence		
				Deceased	Current other	DAS total
Distress						
Nonbereaved	60	0.61	0.46	.35*	.06	-.48***
Bereaved 6 months	52	0.95	0.60	.43**	.42**	-.29*
Bereaved 14 months	47	0.82	0.52	.37*	.41**	-.19
Bereaved 25 months	41	0.45	0.39	.57***	.14	-.19
Perceived health						
Nonbereaved	60	0.73	0.19	-.23	.01	.28*
Bereaved 6 months	52	0.63	0.21	-.27*	-.03	.26*
Bereaved 14 months	47	0.70	0.17	-.31*	-.08	.25*
Bereaved 25 months	41	0.73	0.21	-.32*	.08	.18
Grief						
Bereaved 6 months	52	9.78	5.69	.30*	.25	-.03
Bereaved 14 months	47	6.10	5.30	.23	.18	-.01
Bereaved 25 months	41	4.50	3.97	.11	.24	-.07

Note. SROS = Semantic Representation of Others Scale; DAS = Dyadic Adjustment Scale; GSI = Global Symptoms Index.

* $p < .05$. ** $p < .01$. *** $p < .001$.

DAS scores from the nonbereaved sample, $t(142) = 3.53$, $p < .001$.

Ambivalent representations. The level of ambivalence toward the partner in the nonbereaved sample ($M = 0.57$, $SD = 0.49$) was similar to that observed in the pilot sample ($M = 0.62$, $SD = 0.47$; see the Method section), $t(173) = 0.75$, $p = .46$. A repeated measures analysis of variance (ANOVA; partner and current important other) comparing ambivalence in the nonbereaved sample and in the bereaved sample at 6 months evidenced a main effect for bereavement status, $F(1, 106) = 35.94$, $p < .001$. Bereaved participants were more ambivalent about their deceased partners ($M = 0.99$, $SD = 0.71$) than the nonbereaved participants were about their current partners ($M = 0.57$, $SD = 0.49$) and also more ambivalent about their current important other ($M = 0.99$, $SD = 0.68$) than the nonbereaved participants ($M = 0.45$, $SD = 0.50$). Within the bereaved sample, ambivalence scores at 6 and 14 months were positively, but nonsignificantly, correlated for the deceased ($r = .23$, $p > .25$) and current important other ($r = .22$, $p > .25$). However, the mean levels of 6- and 14-month ambivalence did not differ significantly for either the deceased, $t(19) = 1.31$, $p > .21$, or the current other, $t(19) = 1.34$, $p > .19$. Thus, compared with the one-time measures from the nonbereaved sample, bereaved participants at 14 months were still more ambivalent toward their partners ($M = 1.00$, $SD = 0.67$), $t(78) = 3.46$, $p < .001$, and toward their current important others ($M = 0.79$, $SD = 0.34$), $t(78) = 2.95$, $p < .005$.³

Correlations Between Relationship Representations and Grief, Health, and Distress

Table 2 displays the correlations of ambivalence and DAS scores, measured once in the nonbereaved sample and at 6 months in the bereaved sample, with the outcome measures.

Perceived dyadic adjustment. In the nonbereaved sample, DAS scores were inversely correlated with distress ($r = -.48$, $p < .001$) and positively correlated with perceived health ($r = .28$, $p < .05$). In the bereaved sample, DAS scores at 6 months were inversely correlated with distress at 6 months ($r = -.29$, $p < .05$) and positively correlated with perceived health at 6 months ($r = .26$, $p < .05$) and 14 months ($r = .25$, $p < .05$) but not significantly associated with interviewer-rated grief. Thus, perceived adjustment in the conjugal relationship was generally associated with less distress and better perceived health but showed little association with long-term outcome.

Ambivalent representations. In the nonbereaved sample,

³ Because the bereaved sample was older and had longer relationships with their (deceased) conjugal partners relative to the nonbereaved sample, we considered whether these differences may have at least in part accounted for the sample differences in ambivalence and DAS scores. A regression analysis, with SROS ambivalence as the dependent variable, however, did not reveal meaningful linear prediction from either age or duration of the conjugal relationship ($ps > .15$). A similar regression analysis, with DAS total score as the dependent variable, showed linear prediction only from duration of relationship ($\beta = -0.68$, $p < .001$). However, the interaction of duration of relationship with the bereaved-nonbereaved distinction was also significant ($\beta = 0.78$, $p > .001$), indicating that the slopes of duration of relationship against ambivalence were different (i.e., nonparallel) in each sample; thus, an analysis of covariance was not appropriate (Stevens, 1986). Calculation of regression slopes separately for each sample revealed that duration of relationship was inversely sloped against DAS scores in the nonbereaved sample ($\beta = -0.14$) and was even more steeply sloped in the inverse direction against DAS scores in the bereaved sample ($\beta = -0.21$). This pattern of covariation does not explain the greater DAS scores in the bereaved sample. Thus, sample differences in either age or the duration of the conjugal relationship offer little in the way of alternative explanation for the observed sample differences in ambivalence and DAS scores.

ambivalent representations of the partner correlated only with self-reported distress ($r = .35, p < .05$). Ambivalent representations of the current other were not meaningfully related to outcome. In the bereaved sample, ambivalent representations of the deceased partner at 6 months correlated with self-reported distress at each assessment (6 months, $r = .43, p < .01$; 14 months, $r = .37, p < .05$; 25 months, $r = .57, p < .001$), with perceived health at each assessment (6 months, $r = -.27, p < .05$; 14 months, $r = -.31, p < .05$; 25 months, $r = -.32, p < .05$), and with interviewer-rated grief at 6 months ($r = .30, p < .05$). Bereaved participants' ambivalent representations of the current other at 6 months were also correlated with distress at 6 months ($r = .42, p < .01$) and 14 months ($r = .41, p < .01$). Thus, ambivalent representations of the conjugal partner in general (current or deceased) were associated with distress, whereas ambivalent representations of the deceased spouse in particular were associated with greater distress and poorer perceived health over time and with concurrent assessments of interviewer-rated grief.

Evaluating the Ambivalence-Prolongs-Grief Hypothesis

Although DAS scores showed little association with long-term outcome, meaningful correlations emerged between ambivalent representations of the lost spouse and concurrent grief, later distress, and perceived health. In the absence of further analyses, however, these findings document only the association between these variables and say little about their possible predictive relationship. In other words, the correlative findings cannot distinguish whether ambivalence predicts grief or simply manifests as a feature of grief. To more fully evaluate the unique predictive relationship between initial (6-month) ambivalence and 14- and 25-month outcome, we next calculated partial correlations between 6-month ambivalence and later scores on each outcome variable (distress, health, and grief) that controlled for the 6-month scores on that outcome variable. The results offered little support for the ambivalence-prolongs-grief hypothesis. With initial scores on the outcome measures controlled, only 1 of the 12 partial correlations between initial ambivalence and outcome was significant: Controlling for initial distress, we found that ambivalence toward the deceased partner at 6 months was still significantly correlated with distress at 14 months ($r = .30, p < .05$). None of the remaining partial correlations for ambivalence, toward either the deceased or the current other, approached significance ($ps > .15$).

Exploring the Link Between Grief and Later Representations of the Lost Relationship

A similar set of zero-order and partial correlations were conducted to explore the opposite pathway: initial grief predicting subsequent representations of the lost conjugal relationship. Data from repeat administrations of the DAS were available for all 14-month participants, whereas repeat SROS scores were available for a randomly selected subset of 20 participants (43% of the 14-month sample). Participants who received the SROS a second time were representative of the sample as a whole. Analyses of possible differences between participants who received the SROS a second time ($n = 20$) and those who did

not ($n = 27$) for initial scores on the SROS and the DAS, and for demographic and outcome variables, did not approach significance ($ps > .15$). In addition, a reexamination of the correlations between 6-month ambivalence and outcome using only those 20 participants who received the SROS at 14 months produced approximately the same result as with the full sample (i.e., 6-month ambivalence toward the deceased correlated with distress and perceived health and, to a lesser extent, interviewer-rated grief but was not predictive of these outcome scores once initial grief, health, or distress were statistically controlled).

Ambivalent representations. Zero-order correlations between 6-month distress, perceived health, and interviewer-rated grief and 14-month ambivalence ($n = 20$) are displayed in Table 3. Six-month distress correlated with 14-month ambivalent representations of the partner ($r = .37, p < .05$) and the current other ($r = .41, p < .05$). Similarly, interviewer-rated grief at 6 months correlated with 14-month ambivalent representations of the partner ($r = .50, p < .01$) and current other ($r = .38, p < .05$). To determine the unique predictive relationship between 6-month grief and distress and 14-month ambivalence, we computed partial correlations that controlled for initial ambivalence. As can be seen in Table 3, with initial ambivalence controlled, interviewer-rated grief at 6 months still predicted ambivalence toward the deceased partner at 14 months ($pr = .49, p < .01$) and showed a marginally significant predictive association to ambivalence toward the current important other at 14 months ($pr = .34, p < .10$). Similarly, 6-month distress, with initial ambivalence controlled, showed marginally significant associations with 14-month ambivalence toward the deceased partner ($pr = .30, p < .10$) and current important other ($pr = .35, p < .10$).⁴

These findings raise the question of whether the predictive relationship between initial grief and later ambivalence might be explained by changes in either the separate positive or separate negative ratings that compose the SROS. Positive ratings at 6 months were highly correlated with positive ratings at 14 months (deceased, $r = .61, p < .001$; current other, $r = .50, p < .01$). Negative ratings at 6 months were marginally significantly correlated with 14-month negative ratings (deceased, $r = .31, p < .10$; current other, $r = .38, p < .10$). When initial (6-month) positive ratings were controlled, grief at 6 months was not reliably correlated with 14-month positive ratings (deceased, $r = .21, p < .20$; current other, $r = .21, p < .20$). In contrast, when initial negative ratings were controlled, 6-month levels of grief were still highly predictive of 14-month negative ratings of the partner ($r = .56, p < .01$) and showed a marginally significant association to 14-month negative ratings of the current other ($r = .33, p < .10$). Thus, initial grief appears to predict ambivalence at later dates primarily by increasing the negative evaluations of both the deceased partner and the current important other.

Perceived dyadic adjustment. To explore whether initial grief and distress also predicted later recollections of dyadic

⁴ Because of the number of correlations considered, only those with a probability of less than .05 are reported as significant in this article. However, because of the small sample and corresponding reduction in power for the 14-month SROS analyses, marginally significant correlations ($p < .10$) are reported.

Table 3

Zero-Order and Partial Correlations for Distress (GSI), Perceived Health, Interviewer-Rated Grief at 6 Months Postloss, and DAS and SROS Ambivalence at 14 Months Postloss

Variable	14-month ambivalence (<i>r</i>)		14-month ambivalence, controlling for 6-month ambivalence (<i>pr</i>)		14-month DAS score for deceased (<i>r</i>)	14-month DAS score for deceased controlling for 6-month DAS score (<i>pr</i>)
	Deceased	Current other	Deceased	Current other		
Distress at 6 months	.37*	.41*	.30†	.35†	-.48***	-.46***
Perceived health at 6 months	-.10	-.26	.04	-.25	.28*	.25*
Grief at 6 months	.50**	.38*	.49**	.34†	-.21	-.35**

Note. GSI = Global Symptoms Index; DAS = Dyadic Adjustment Scale; SROS = Semantic Representation of Others Scale.

† $p < .10$ (marginally significant). * $p < .05$. ** $p < .01$. *** $p < .001$.

adjustment, we computed zero-order correlations for the same variables and 14-month DAS scores ($n = 47$). As can be seen in Table 3, 6-month levels of distress were inversely correlated with 14-month DAS scores ($r = -.48, p < .001$) and 6-month levels of perceived health were positively correlated with 14-month DAS scores ($r = .28, p < .05$). When we computed partial correlations, controlling for initial (6-month) DAS scores, 14-month DAS scores were significantly predicted by 6-month distress ($pr = -.46, p < .001$), perceived health ($pr = .25, p < .05$), and grief ($pr = -.35, p < .01$).

In sum, 6-month elevations in grief and distress predicted later ambivalence toward the deceased spouse and later recollections of poorer adjustment in the lost conjugal relationship. Further, low initial levels of perceived health, although unrelated to ambivalence, also predicted later recollections of the degree of adjustment in the lost conjugal relationship.

Discussion

The present study examined the long-held but untested hypothesis that ambivalence during conjugal bereavement interferes with the mourning process and prolongs grief. We developed the SROS, a self-report measure of ambivalence toward specified other people that is based on the algorithmic combination of separate positive and negative trait ratings (Scott, 1966), and assessed its predictive association with outcome in a conjugally bereaved sample and a nonbereaved comparison sample. In preliminary support of its construct validity, SROS ambivalence toward the conjugal partner was inversely correlated with perceived adjustment in the conjugal relationship and positively correlated with both emotional instability (neuroticism) and specific difficulties in the interpersonal sphere (IIP). In addition, consistent with Bowlby's (1980) description of ambivalent yearning followed by angry reproach, SROS ambivalence toward the deceased spouse was associated with the sequence of facial expressions of sadness followed by anger.

When compared with outcome data, SROS ambivalence scores for conjugal partners were generally associated with distress and poor perceived health, regardless of bereaved-nonbereaved status and, in the bereaved sample, with interviewer-rated grief. However, the ambivalence-prolongs-grief hypothesis received little support. Ambivalent representations of the de-

ceased spouse, measured 6 months after the loss, were correlated with self-reports of distress and poor health at later measurements through 25 months of bereavement but were not related to interviewer-rated grief scores beyond 6 months. More important, when partial correlations were used to adjust for initial scores on these variables—and thus to establish the unique predictive relationship between the variables—ambivalence early in bereavement was not meaningfully predictive of later grief or health. Only the association between early ambivalence and 14-month distress, but not 25-month distress, remained significant at the .05 level after initial distress was controlled. Given the number of correlations examined, this finding at best only weakly supports the ambivalence-prolongs-grief hypothesis.

Interestingly, exploration of the opposite pathway—early grief leading to later ambivalence—revealed more consistent findings. Both interviewer-rated grief and self-reported distress at 6 months postloss were significantly correlated with 14-month levels of ambivalence toward the partner. Further, when partial correlations were used to adjust for initial levels of ambivalence, initial grief, and, to a lesser extent, initial distress, they were still predictive of 14-month ambivalence. Analyses of the SROS scores for current important others suggested that the increasing ambivalence associated with severe grief may have generalized to important figures in the survivor's life, although in this case the findings were less robust and more appropriately considered as a trend rather than a clear predictive relationship. The relatively small sample from which the 14-month ambivalence findings were obtained ($n = 20$) raises some concern that these findings may be spurious. However, a compatible predictive pattern was demonstrated between initial grief, distress, and perceived health and 14-month recollections of the quality of the lost relationship (DAS). Specifically, grief and distress each predicted lower DAS scores over time, whereas perceived health predicted higher DAS scores over time, and these associations remained significant even after initial DAS scores were controlled. Importantly, because we obtained the DAS findings using the full 14-month sample ($n = 47$), the evidence for the reverse predictive relationship is strengthened considerably.

Before we speculate on the broader implications of these findings, note that the ambivalence data are limited because they

were obtained by using a new measure and a relatively small, homogeneous sample. Further research is needed (a) to establish more firmly the validity of the SROS as a measure of ambivalent interpersonal representations by using different and more heterogeneous samples; (b) to more completely map the difference between ambivalence and general relationship adjustment; (c) to replicate the causal link among early grief and distress, increased ambivalence, and decreased relationship adjustment over time; and, finally, (d) to examine more closely the range of interpersonal representations in the bereaved survivor's life. Another possible limitation to consider in these data is the possible confounding influence of sample biases. Bereaved respondents in general showed a greater magnitude of ambivalence toward their deceased spouses but also rated the lost conjugal relationship as better adjusted than did nonbereaved individuals in evaluating their current conjugal partner. It is possible that these effects were due simply to uncontrolled differences between the samples. This possibility was minimized to some extent by the demonstration of relatively equal ambivalence scores in two different nonbereaved samples and by the fact that bereaved participants still showed greater ambivalence and higher DAS scores even after sample differences in age and duration of the conjugal relationship were statistically controlled. Further, the greater ambivalence among conjugally bereaved individuals is compatible with the general concomitance between ambivalence and distress. Likewise, the higher DAS scores in the bereaved sample are consistent with the idealization of the lost spouse observed in previous bereavement studies (Futerman et al., 1990; Lopata, 1979; Parkes & Weiss, 1983). The distinction between these possible explanations, however, cannot be addressed further within the bounds of the present data set.

Given these limitations, the question remains why the findings of the present study failed to support the widely accepted ambivalence-prolongs-grief hypothesis and why instead initial grief predicted subsequent ambivalence and poorer recollections of the quality of the lost relationship. One possible explanation is that the early and still highly influential theories of bereavement, rooted in Freud's (1917/1957) writing on mourning, simply mistook the concomitance between ambivalence and distress as evidence for causality. In other words, ambivalent representations of the deceased may, in fact, "come to the fore" as a result of the disruptive pain of the loss; however, as the present data suggest, such representations may be more accurately described as products of severe grief rather than as predictors of grief. Such an explanation is consistent with observations that ambivalence is, to some extent, present in all intimate relationships (Bleuler, 1911; Sincoff, 1990) and with Parks and Weiss's (1983) speculation that both ambivalence and grief may have their source in other common variables (e.g., personality).

Another way to consider the incompatibility of the present findings with existing bereavement theories is that their reliance on the use of infant-caregiver attachment and separation behaviors as their primary metaphor for the loss experience in adults may have led to an overestimation of the stability of adult interpersonal representations. Although the mean level of ambivalence in bereaved participants' representations of the deceased did not differ from 6 to 14 months postloss, the predictive links between initial grief and distress and later SROS and DAS scores

demonstrated a direct association between psychological distress and changes in the way the lost relationship is represented over time. In a similar vein, ambivalence may have generalized to the current important other simply because important people in the survivor's life tend to be intimately involved in the mourning process. Consistent with this possibility, bereaved participants typically chose as their current important other persons whom they had known for many years and who, in turn, had known the deceased spouse. Half of the current important others were the survivors' own children, and the remainder were either relatives, friends, or new or old romantic partners. Alternatively, increased ambivalence toward important others may reflect actual increases in tension in these relationships. Distressed individuals typically place an increased burden on their support networks (Coyne, 1976; Harber & Pennebaker, 1992). During bereavement, depressed individuals require additional social supports but also tend to report more dissatisfaction with their support networks (Nuss & Zubenko, 1992).

Note that these findings do not completely contradict the contemporary bereavement literature. Specifically, the ways in which the mourning process interacted with changes in the representation of the lost conjugal partner corroborate several bereavement theorists' accounts of an initial yearning (sadness) that is gradually augmented with anger and hostility toward the deceased for their absence, for their not having cared for themselves better when they were alive, or for allowing what seemed to the survivor like a selfish infliction of their own death (Bowlby, 1980; Cerney & Buskirk, 1991; Lazare, 1989; Parkes & Weiss, 1983). In the present study, these observations were consistent with the findings that positive representations remained relatively stable between 6 and 14 months, whereas negative representations of the partner showed greater variability over time and were predicted more clearly by initial levels of grief. This pattern is also suggested in the link between ambivalent representation on the SROS and the frequency with which participants evidenced facial expressions of sadness followed by anger while discussing the deceased.

Perhaps an even more basic explanation for the link between grief and increasingly negative views of the lost relationship is that the emotional disruption of loss leads to a form of state-dependent memory bias not unlike that observed in depression (Blaney, 1986) or in the recall of pain (Smith & Safer, 1993). In this view, the depressive aspects of grief would render the more painful or undesirable features of the lost relationship increasingly more accessible to recall and would result in a more negative reconstruction of the relationship over time. Further, the global nature of the memory biases associated with depression (Clark & Teasdale, 1982) suggests that this process would likely extend to other important social interactions (Forgas, Bower, & Krantz, 1984), thus providing an explanation for the generalization of ambivalence to the current important other. A similar explanation is suggested by more general theories of the reconstructive nature of human memory (Bonanno, 1990, 1995; Christianson & Safer, 1996; B. Ross, 1991). Emotional memories tend to be biased in favor of current emotional states (Levine, 1997). Similarly, recollections of the past quality of romantic relationships tend to be biased in the direction of current feelings toward the partner (McFarland & Ross, 1987). Thus, the intense negative emotions associated with grief (Bonanno &

Keltner, 1997), combined with the pining for the return of the deceased, may foster in severely grieved individuals the belief that the lost relationship was always associated with pain and unresolved needs.

A slight variation on this interpretation is suggested by the very likely possibility that severely grieved individuals pine for the deceased but may find little comfort in idealized images of the deceased. Although idealized representations of deceased spouses in general appear to persist for at least several years after the loss (Futerman et al., 1990), extremely grieved individuals may more readily forsake idealization in favor of the downgrading of the representation of the deceased as a means of reducing the value of the lost relationship and, thus, hastening recovery. It is not fully apparent how this type of explanation would account for the increased ambivalence toward the current other. It may be that a compatible process occurs as a protective mechanism for intimacy in general. That is, the pain of the loss may result in a general wariness or ambivalence toward all important relationships.

In conclusion, the present study provided little support for the widely accepted causal relationship between ambivalence and grief course. Rather, the findings showed the opposite pattern in which initial grief and distress predicted increased ambivalence and recollections of poorer adjustment in the lost relationship. In light of the fact that a new measure of ambivalence was developed for the present study and that the reverse causal pattern was revealed by secondary, exploratory analyses, these explanations cannot be evaluated fully until additional data become available. Clearly, however, the findings suggest a number of possible avenues for subsequent research on how representations of lost relationships might change over time and how they might both inform and interact with psychological adaptation to loss.

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